

CLINICAL ARTICLE

Obstetrics

Establishing communication with relatives of admitted obstetrical patients with COVID-19 infection during COVID-19 pandemic: A quality improvement initiative

Anubhuti Rana¹ | K. Aparna Sharma¹ | Saumya Kulshrestha¹ | Puneet Khanna² |
Neerja Bhatla¹ | Sunesh Kumar¹ | Anjan Trikha²

¹Department of Obstetrics and Gynaecology, All India Institute of Medical Sciences, New Delhi, India

²Department of Anaesthesia, Pain Medicine and Critical Care, All India Institute of Medical Sciences, New Delhi, India

Correspondence

K. Aparna Sharma, Department of Obstetrics and Gynaecology, All India Institute of Medical Sciences, New Delhi, India.
Email: kaparnasharma@gmail.com

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Abstract

Objectives: To establish communication with relatives of obstetrical patients with coronavirus disease 2019 (COVID-19) admitted to an isolation ward by systematic use of quality improvement tools during the COVID-19 pandemic as there were many challenges in communicating with relatives.

Methods: The study was conducted in the Department of Obstetrics and Gynecology at a tertiary-care teaching hospital based on four systematic steps of Point of Care Improvement methodology. After identifying the problem, a quality improvement team was constituted, which formed a specific aim. After root-cause analysis with fishbone tool, three Plan-Do-Study-Act (PDSA) cycles with various interventions were planned.

Results: The outcome was measured as percentage of relatives of obstetrical patients admitted to the hospital with COVID-19 who were counseled about vital patient-related information. The baseline percentage of counseling of relatives of COVID-19-positive obstetrical patients admitted to the hospital was 14% per day. After three PDSA cycles, the target of 66.5% was achieved.

Conclusion: Communication with the relatives of COVID-19-positive obstetrical patients admitted to isolation wards in the hospital could be easily streamlined without any additional resources using the principles of quality improvement during the COVID-19 pandemic.

KEYWORDS

communication, COVID-19, plan-do-study-act (PDSA), quality improvement

1 | INTRODUCTION

Coronavirus disease 2019 (COVID-19) has set unprecedented challenges in healthcare settings. Meticulous reorganization of infrastructure, manpower, and resources has been the cornerstone for management of this crisis during the pandemic.¹ Despite the huge

diversion of manpower to COVID-19 services, which has ensured a continued delivery of the optimum content of care, the quality of care has been recognized as an area with scope for improvement during the pandemic.^{2,3}

The care should be timely, efficient, and most of all should make the patient feel safe and reassured. Stigma around the disease, strict

isolation protocols, and the physical barriers imposed by the personal protective equipment (PPE) have all contributed to a decrease in interaction between patients and the healthcare providers. In such a scenario, daily communication and clinical counseling sessions have become non-existent, especially in COVID-19 wards as relatives were unable to meet the treating doctors to obtain updates on the condition of the patients, so compounding their anxiety. Moreover, there was no set protocol for clinical counseling as opposed to counseling in person at the time of hospital admission or during visiting hours before the pandemic.

The present work was conducted to establishing essential and effective communication with patients and their relatives in the setting of a COVID-19 ward among obstetrical patients using quality improvement principles.^{2,4}

1.1 | Problem description

All the COVID-19-positive pregnant or postpartum women at the All India Institute of Medical Sciences, New Delhi who required admission for management of labor or obstetrical complications were admitted to the Trauma Centre, All India Institute of Medical Sciences, New Delhi. It was a stressful time for them as no attendant was allowed to stay in the isolation ward with the patient. Visitors were also not allowed during this time. The patients and their families were anxious about the effect of COVID-19 on the pregnancy and the baby. The use of PPE by the resident doctors at all times was also perceived as a barrier for interpersonal communications by the patients because the usual non-verbal cues were masked. Family members were also unable to meet the treating doctors to obtain updates on the condition of the patients, adding to their anxiety. In addition, there was no set protocol for this situation as opposed to counseling in person at the time of hospital admission or during visiting hours before the pandemic.

1.2 | Rationale

Effective doctor-patient communication is the key to resolving fear, stress, and anxiety among patients and their relatives. Before the pandemic, the patients and their relatives were counseled about relevant clinical information and were updated about their condition in person during visiting hours. However, this was not possible in person because no relatives were allowed in the isolation ward where obstetrical patients with COVID-19 were admitted. Therefore, the project aimed to establish communication with relatives of COVID-19-positive patients admitted to isolation wards by using the principles of quality improvement.

1.3 | Available knowledge

Studies have shown that effective doctor-patient communication leads to improved patient satisfaction, follow up, and adherence to treatment.^{5,6} It has been seen that patients who stay alone

in COVID-19 isolation wards without family members have increased stress and fear regarding the disease status, treatment, and prognosis and also about the daily activities of patients in the ward.⁷ Relatives of critically ill patients are also at increased risk for depression (70%), anxiety (80%), and traumatic stress symptoms (57%).⁸

1.4 | Specific aim

This project aimed to establish the practice of daily clinical counseling sessions with relatives of obstetrical patients with COVID-19 from the baseline to 70% over 4 weeks (October 1 to October 28, 2020).

2 | MATERIAL AND METHODS

2.1 | Context

A prospective quality improvement study was conducted in the Department of Obstetrics and Gynecology at a tertiary-care teaching institute of India. The study population included all obstetrical patients with COVID-19 admitted to the COVID-19 ward of the hospital from October 1 to October 28, 2020. Twenty COVID-19-positive obstetrical patients were admitted in the month of October 2020 and 25 in the month of November whose relatives were counseled about the clinical conditions on a daily basis.

2.2 | Intervention

The Point of Care Quality Improvement model was used to sensitize the resident doctors to the quality improvement initiative and methodology. The four steps of quality improvement were introduced systematically. The first step was problem identification, making a team and forming an aim statement. The problem identified was the lack of clinical debriefing of relatives of COVID-19-positive obstetrical patients admitted to an isolation ward. A team of eight fixed members including faculty and resident from the Department of Obstetrics and Gynecology and faculty from the Department of Anesthesia was formed, all of which have knowledge of and training in quality improvement and a smart aim statement was formed. The anesthesia faculty were in charge of the isolation wards and would communicate better about the management regarding COVID-19-related issues. They were involved because the obstetrics team was not well versed in the nuances of COVID-19 treatment. The second step was the problem analysis using a quality improvement tool. A root cause analysis for the lack of proper clinical counseling for the relatives of obstetrical patients admitted to the COVID-19 ward

was performed using the fishbone tool (Figure 1). Subsequently, the baseline data were collected daily for 1 week regarding the percentage of relatives of admitted obstetrical patients with COVID-19 infection who were counseled about clinical condition daily by one team member and data were updated daily. During the third step, various change ideas were implemented and tested. Implementation of various interventions was carried out by the core quality improvement team and COVID-19 teams of residents posted weekly in the trauma center who had been previously oriented with quality improvement methodology in various departmental workshops. A WhatsApp group including the team members and all the residents posted to the ward was also created to update the data on a daily basis. The data were collected by one quality improvement team member (senior resident). Compliance of regular data collection was ensured by daily update on the WhatsApp group and open communication with the core quality improvement team at regular intervals. A time-series design was applied and multiple time periods before and after each intervention discussed subsequently in various Plan-Do-Study-Act (PDSA) cycles were evaluated. Finally, the fourth step was the sustenance phase for which, residents were constantly motivated and the completed checklists were collected at the end of each week.

2.3 | Measures

The percentage of relatives of admitted obstetrical patients with COVID-19 infection for undergoing counseling about clinical condition daily was decided to be the process indicator. The data were collected manually on a daily basis by the COVID-19 team posted on duty. A checklist was made to ensure uniformity of content of counseling by all residents, which was filled for relatives of all admitted patients and collected at the end of each day (Figure 2). Moreover, to ensure the satisfaction of the relatives of admitted COVID-19-positive obstetrical patients about the information provided, a

feedback form with four questions and approved by all team members was introduced. (Figure 3).

2.4 | Analysis

The team decided to hold online meetings every afternoon initially for 2 weeks to review the data collected in the morning. Based on the inputs, several successive interventions were undertaken in the PDSA cycle and the next intervention was planned from the lesson learned from each cycle (Table 1).

A time series chart was made and multiple time periods before and after each intervention were evaluated (Figures 4 and 5). SQUIRE 2.0 guidelines were followed for standardizing the documentation of the improvement project.

2.5 | Patient and public involvement

The quality improvement team conducted daily clinical debriefing sessions for the patients admitted to the COVID-19 ward and their relatives. Feedback was obtained from the relatives of admitted COVID-19-positive obstetrical patients about the clinical debriefing sessions upon discharge or at the end of 1 week.

2.6 | Ethical considerations

This project was deemed an improvement study and local policy meant that ethical approval was not required.

3 | RESULTS

The baseline percentage of counseling of relatives about the clinical condition of admitted obstetrical patients with COVID-19 during

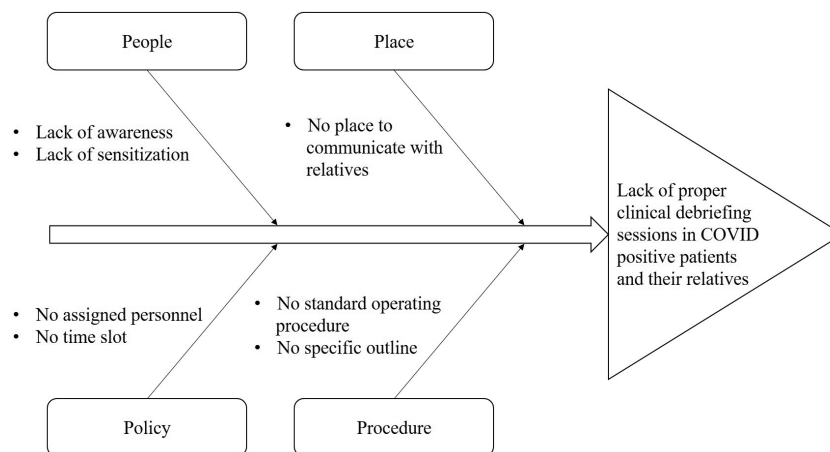


FIGURE 1 Fish bone analysis of the reasons behind lack of proper clinical debriefing sessions in COVID-19-positive patients and their relatives

		COMMUNICATION QI PROJECT						
1	DATE	UPDATE ON MOTHER	UPDATE ON BABY	UPDATE ON TREATMENT	UPDATE ON DISCHARGE	Patient	Relative	Sign
2	01-10-2020							
3	02-10-2020							
4	03-10-2020							
5	04-10-2020							
6	05-10-2020							
7	06-10-2020							
8	07-10-2020							
9	08-10-2020							
10	09-10-2020							
11	10-10-2020							
12	11-10-2020							
13	12-10-2020							
14	13-10-2020							
15	14-10-2020							
16	15-10-2020							
17	16-10-2020							
18	17-10-2020							
19	18-10-2020							
20	19-10-2020							
21	20-10-2020							
22								

FIGURE 2 Checklist used for clinical debriefing of relatives of admitted COVID-19-positive obstetrical patients

Relative Feedback Form

I. I am satisfied with the information provided regarding status of my patient at the time of admission.

Strongly agree	Somewhat agree	Neither agree or disagree	Somewhat disagree	Strongly disagree

II. I was counselled about the management, plan of delivery and/or status of the patient on a regular basis.

Strongly agree	Somewhat agree	Neither agree or disagree	Somewhat disagree	Strongly disagree

III. I was explained about my patient’s condition in simple language without use of medical jargons.

Strongly agree	Somewhat agree	Neither agree or disagree	Somewhat disagree	Strongly disagree

IV. I was updated about the discharge policy and the instructions at discharge.

Strongly agree	Somewhat agree	Neither agree or disagree	Somewhat disagree	Strongly disagree

FIGURE 3 Feedback form to take feedback from relatives about clinical debriefing of admitted COVID-19-positive obstetrical patients

7 days of baseline measurements was 14%. This was a result of the lack of clarity on by whom, when, where, and how the counseling of the relatives should be done. All the residents were very sensitive to this need and the project immediately gained momentum.

3.1 | First PDSA cycle

Intervention: Sensitization and forming a standard operating procedure.

TABLE 1 Plan-Do-Study-Act cycle as implemented for improving communication with relatives of COVID-19-positive obstetrical patients admitted in the hospital

Plan	Do	Study	Act
PDSA 1: 7 days			
Sensitization and forming a standard operating procedure	<ol style="list-style-type: none"> 1. Assign one doctor (senior resident of COVID-19 team) for counseling 2. Sensitization of resident doctors about need for counseling about clinical condition for relatives whose patients were admitted in the hospital in the time of pandemic. An online meeting of all the team members and residents of the COVID-19 team was held 1 day before change of the COVID-19 team on a weekly basis to explain about the project, apart from just handovers about patients 3. Formation of a standard operating procedure for counseling about the clinical condition of patients to relatives over telephone 		Lessons learnt: <ol style="list-style-type: none"> 1. Most relatives could not be contacted at random times of rounds by the doctor 2. The content of the counseling was not fixed 3. There was no mechanism to take feedback from relatives about the same
PDSA 2: 7 days			
The process and timing of counseling about clinical condition should be more clearly defined and monitored	<ol style="list-style-type: none"> 1. Specific time slots were assigned for counseling about clinical condition 2. Implementation of checklist for content of counseling by the resident doctors 3. Re-sensitization of resident doctors about need for counseling for relatives about clinical condition of the patients 		Lessons learnt: <ol style="list-style-type: none"> 1. Relatives did not receive phone calls from hospital mobile/landline numbers at all times 2. There was a drop in number of relatives counseled on the first day of the week when duty changeover happened between residents (Adapt the change Idea: Effective change idea but long-term feasibility needs to assessed)
PDSA 3: 7 days			
Improvement in proportion of relatives being counseled based on predesigned checklist	<ol style="list-style-type: none"> 1. Practice of making the phone call from the patient's phone itself 2. Over about the quality improvement initiative given to the next duty team 1 day before the start of their COVID-19 week duty 	Percentage of relatives provided with daily clinical counseling increased from a baseline of 14% to 66.5%	Lessons learnt: Effective change idea

Abbreviations: COVID-19, coronavirus disease 2019; PDSA, Plan-Do-Study-Act.

There was a practice to counsel the relatives in person about vital information related to the patient upon admission and also at the time of visiting hours before the pandemic. This was not possible during the pandemic because the patient was admitted to an isolation ward and there was restricted entry of relatives to the ward. The first PDSA was undertaken and a standard operating procedure for conducting the counseling of relatives about patients' clinical condition was formed by the team members. It was decided that the senior resident of the COVID-19 team posted weekly from our department would perform this counseling telephonically for the relatives after the clinical rounds. An online meeting was held 1 day before the change of the COVID-19 team to explain the project and take feedback from the previous team, apart from just handovers. This weekly meeting was mediated by all the team members to encourage the residents to continue the project. The practice was then observed for 1 week and data were recorded for the same period.

3.2 | Second PDSA cycle

Intervention: Refining the process and timing of counseling.

From the results of PDSA 1, it was observed that most relatives could not be contacted because there was no fixed time for the clinical rounds by the doctors. Moreover, the content of counseling was not well detailed in spite of high-risk consent taken about the patient's condition. There was no defined mechanism for feedback from the relatives. A few ideas for changes to overcome these problems in the second PDSA cycle were suggested by the team. It was decided to assign specific time slots for relative counseling instead of doing it at random times. In addition, a checklist detailing the content of counseling was implemented (Figure 2). This included the indication of admission, current pregnancy status, effect of COVID-19 on pregnancy and baby, and further management or discharge policy. A detailed proforma was also

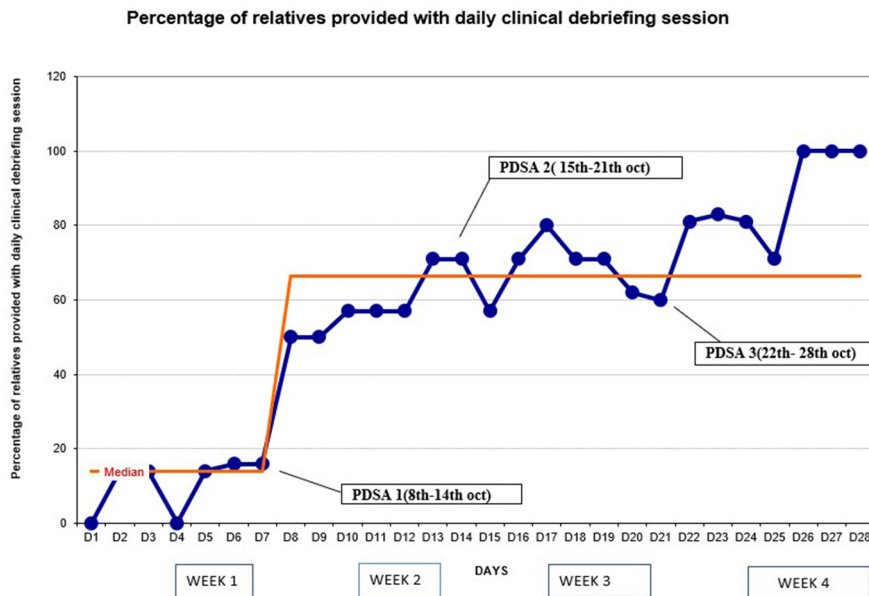


FIGURE 4 Time series chart depicting the percentage of relatives provided with daily clinical debriefing sessions over three PDSA cycles

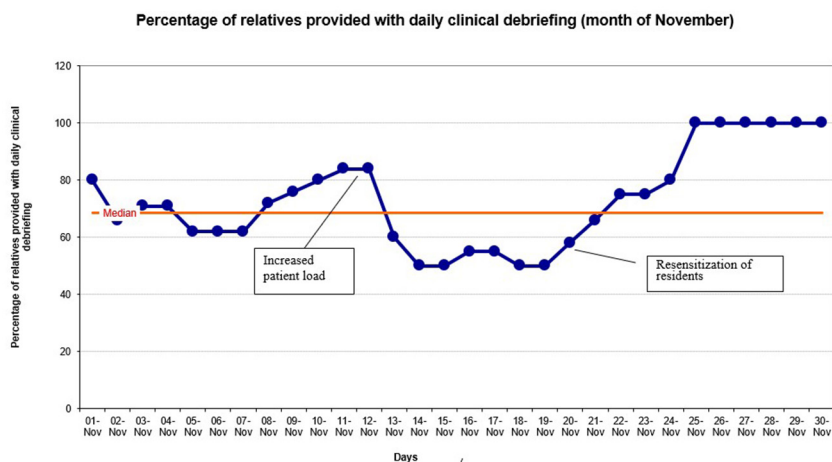


FIGURE 5 Time series chart depicting the long-term sustainability of the quality improvement initiative with figure showing the percentage of relatives provided with daily clinical debriefing sessions in November 2020

made to take feedback from the relatives at the time of discharge (Figure 3). Compliance was ensured by the signed checklist in the case sheets and a picture of the same was posted in the WhatsApp group so that all team members could also keep a check on the proceedings. These change ideas were executed with remarkable success in PDSA 2.

3.3 | Third PDSA cycle

Intervention: Re-sensitization at time of duty changeover among residents.

At the end of the second PDSA cycle it was noticed that not all relatives answered calls from landline/hospital mobile numbers. In

addition, the counseling rates dropped on the first day of the week when weekly duty changeover happened among residents. For these reasons, in the third PDSA cycle, it was decided to call the relative from the patient's phone and perform clinical debriefing of both at the same time. Also, to improve the decreased rate of counseling on the day of duty changeover, it was decided to give duty-over to the next duty team (consultant and residents) 1 day before the duty week. Moreover, re-sensitization of COVID-19 residents was carried out in between about the clinical importance of counseling. The percentage of relatives provided with daily counseling over 3 weeks, which included the third PDSA cycles is depicted in Figure 4. It was noted that with all the above interventions the percentage of relatives provided with daily counseling increased from a baseline of 14% to 66.5%. Orientation of the duty team 1 day before

duty and making the call from the patient's phone itself made it easy to overcome the challenge of drop rates and these two change ideas were appreciated by the residents as well.

Feedback was taken from the relatives in the form of a questionnaire. They included questions about satisfaction with the information provided regarding status of patient at the time of admission (Question 1); counseling about the management; plan of delivery (Question 2); explaining the above in a simple language (Question 3); and counseling about the discharge policy and instructions at discharge (Question 4). Their responses were scored from 1 to 5 with 1 being strongly disagree and 5 being strongly agree. In the month of October, when the baseline data were collected, the median score for each question was 1. After three PDSA cycles, the median scores for questions 1–4 were 4, 5, 5, and 4, respectively.

With ongoing weekly handover of the project to duty teams 1 day early, this practice was consistent in the COVID-19 ward with a total of 25 COVID-19-positive obstetrical patients (Figure 5). It was noted that as a result of the sudden increase in number of admitted patients in 1 week, the percentage of counseling significantly dropped because the residents could spend only a limited time in PPE. Residents were re-sensitized and the junior resident was also asked to help the senior resident at the time of clinical rounds for the purpose of counseling as part of sustaining the project to improve the quality of care. Feedback from the relatives also showed a positive response with median scores for questions 1–4 being 5 for all of them. This practice is now sustained in the COVID-19 ward for admitted obstetrical patients by our team of highly motivated residents. The routine use of checklists and the daily updates on the WhatsApp group about the same, which was checked by team members ensured its continuance.

4 | DISCUSSION

The baseline percentage of counseling of relatives of admitted obstetrical patients with COVID-19 during 7 days of baseline measurements was 14%. The quality improvement project gained momentum over the three PDSA cycles, which included interventions such as forming a standard operating procedure, sensitization of residents, defining the timing of counseling and, most importantly, re-sensitization of residents at time of duty changeover. It was indeed a very rewarding experience as a simple idea led to effective communication even in the crisis of the pandemic without any additional resources. The first intervention of sensitization of residents and forming a detailed standard operating procedure brought a significant desired change in practice. To ensure quality of care, the second PDSA cycle helped to define the content of counseling by using a checklist and also to increase the percentage of relatives counseled by setting up a fixed time for contact. This definitely reduced the stress and anxiety of the patients admitted to an isolation facility and also of their relatives. However, there was a drop in the percentage of relatives counseled on the day of duty changeover. As a result, the last change idea to give proper handovers 1 day early to the next

duty team was implemented and this has led to not only achieving the target but also sustaining it. Moreover, it was difficult to sensitize the residents at one go and repeated orientation sessions at weekly intervals especially with duty changeovers were undertaken. The implementation of this project was considered necessary by everyone as it addressed a very sensitive problem with good team work. It was sustained with minimal additional resources and helped to provide quality of care to obstetrical patients. The scalability of the project has been evidenced by the fact that similar projects have been taken up in other wards of the department for reinforcement of effective communication.

A COVID-19 ward is an area where there is a rapid turnover of patients with equally dynamic shifts in resident duties. Implementing and sustaining a quality improvement project in such an area has been challenging but the constant reminders at all levels has kept the team motivated. Regular appreciation and encouragement by the quality improvement team kept the morale high of all residents. Another challenge was communicating vital information about the COVID-19 treatment along with the obstetrical perspective. Most of the obstetrical patients were asymptomatic or had mild disease and hence the counseling did not require much input from the medical colleagues. In the case of a critically ill patient, there was an incident where the relative was informed of the obstetrical aspect but not the COVID-19 aspect, which led to some miscommunication. This was overcome by involving faculty from anesthesia, who were in charge of the isolation ward. Another challenge was a drop in the communication as the patient load increased, because clinical work preoccupied the residents who could only spend a limited time in PPE. A junior resident was recruited at this time to help with communication with the relatives, especially when the senior resident was preoccupied with clinical work or surgeries. There are some potential issues in a project like this where multidisciplinary management of a case is required and, in such cases, the counseling needs to be done cohesively by the care providers.

In conclusion, establishing effective communication is the key component in addition to the reorganization of infrastructure required to cope with the crisis in a pandemic. It was possible to achieve the desired aim because of a positive response from the residents, who understood the need of counseling patients in their times of stress. It was extraordinary to see how this simple idea has been sustained over time without use of any additional resources as the resident doctors have been very sensitive to the importance of the need for communication with patients' relatives during the very difficult times of the pandemic. It is beyond doubt that such a simple change with constant participation of the residents can be successfully implemented to improve patient care in any hospital set-up.

AUTHOR CONTRIBUTIONS

All the authors (AR, KAS, SaK, PK, NB, SK, and AT) made substantial contributions to the conception of the study, the analysis of data and drafting the manuscript. All the authors approved the final version of the manuscript and agreed to be accountable for all aspects of the work.

CONFLICTS OF INTERESTS

The authors have no conflicts of interest.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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